#### PATENT COOPERATION TREATY

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference hh1	FOR FURTHER ACTION	See item 4 below			
International application No. PCT/US2005/001452	International filing date (day/month/year) 18 January 2005 (18.01.2005)	Priority date (day/month/year) 28 January 2004 (28.01.2004)			
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237					
Applicant HH TECHNOLOGIES, INC.					

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).					
2.	This REPORT consists of a total of 4 sheets, including this cover sheet.					
	In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.					
3.	3. This report contains indications relating to the following items:					
	Box No. I	Basis of the report				
	Box No. II Priority					
	Box No. III	Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability				
	Box No. IV	Lack of unity of invention				
	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
	Box No. VI	Certain documents cited				
	Box No. VII	Certain defects in the international application				
	Box No. VIII	Certain observations on the	international application			
4.	4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).					
	Date of issuance of this report 31 July 2006 (31.07.2006)					
The International Bureau of WIPO			Authorized officer			
34, chemin des Colombettes 1211 Geneva 20, Switzerland			Masashi Honda			

e-mail: pt08@wipo.int

Facsimile No. +41 22 338 82 70 Form PCT/IB/373 (January 2004)

#### PATENT COOPERATION TREATY From the INTERNATIONAL SEARCHING AUTHORITY KENNETH M. BUSH BUSH INTELLECTUAL PROPERTY LAW GROUP, LLC PCT P.O. BOX 381146 WRITTEN OPINION OF THE BIRMINGHAM, AL 35238 INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing (day/month/year) 02 SFP 2005 Applicant's or agent's file reference FOR FURTHER ACTION See paragraph 2 below International application No. International filing date (day/month/year) Priority date (day/month/year) PCT/US05/01452 18 January 2005 (18.01.2005) 28 January 2004 (28.01.2004) International Patent Classification (IPC) or both national classification and IPC IPC(7): F24F 13/04, 13/14, 13/08 and US C1.: 454/265, 263, 264, 267, Applicant HH TECHNOLOGIES, INC. 1. This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Priority Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. IV Lack of unity of invention Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement Box No. VI Certain documents cited Box No. VII Certain defects in the international application Box No. VIII Certain observations on the international application 2. FURTHER ACTION If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Scarching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220. 3. For further details, see notes to Form PCT/ISA/220. Name and mailing address of the ISA/ US Authorized office Mail Stop PCT, Attn: ISA/US

Derek S. Boles

Telephone No. 571-272-3700

Form PCT/ISA/237 (cover sheet) (January 2004)

Facsimile No. (703) 305-3230

Alexandria, Virginia 22313-1450

Commissioner for Patents P.O. Box 1450

International application No.
PCT/US05/01452

Box No	o. I Basis of this opinion				
1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.					
	This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).				
2. With r	2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:				
a.	type of material				
	a sequence listing				
	table(s) related to the sequence listing				
b.	format of material				
	in written format				
	in computer readable form				
c.	time of filling/furnishing				
	contained in international application as filed.				
	filed together with the international application in computer readable form.				
	furnished subsequently to this Authority for the purposes of search.				
	Inthished subsequently to this realisticy for the purposes of a second				
3.	In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.				
4. Addit	ional comments:				
	·				
	•				
	·				
2					
[					

Form PCT/ISA/237(Box No. I) (January 2004)

International application No. PCT/US05/01452

Box No. V Reasoned statement under Rule 43 bis. 1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1. Statement				
Novelty (N)	Claims NONE	YES		
	Claims 1-23	NO		
Inventive step (IS)	Claims NONE	YES		
inventive step (ib)		NO		
	01:	YES		
Industrial applicability (IA)	Claims NONE Claims 1-23			
· · · · · · · · · · · · · · · · · · ·				
2. Citations and explanations:				
Claims 1-23 lack novelty under PCT Article 33(2)	as being anticipated by Goettl.			

#### PATENT COOPERATION TREATY From the INTERNATIONAL SEARCHING AUTHORITY KENNETH M. BUSH BUSH INTELLECTUAL PROPERTY LAW GROUP, LLC PCT P.O. BOX 381146 WRITTEN OPINION OF THE BIRMINGHAM, AL 35238 INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing (day/month/year) Applicant's or agent's file reference FOR FURTHER ACTION See paragraph 2 below International application No. International filing date (day/month/year) Priority date (day/month/year) PCT/US05/01452 18 January 2005 (18.01.2005) 28 January 2004 (28.01.2004) International Patent Classification (IPC) or both national classification and IPC IPC(7): F24F 13/04, 13/14, 13/08 and US Cl.: 454/265, 263, 264, 267, Applicant HH TECHNOLOGIES, INC. 1. This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Priority Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. IV Lack of unity of invention Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement Box No. VI Certain documents cited Box No. VII Certain defects in the international application Box No. VIII Certain observations on the international application 2. FURTHER ACTION If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230

Authorized officer

Derek S. Boles

Telephone No. 571-272-3700

Form PCT/ISA/237 (cover sheet) (January 2004)

International application No.
PCT/US05/01452

Box No. 1 Basis of this opinion				
1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.				
This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).				
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:				
a. type of material				
a sequence listing				
table(s) related to the sequence listing				
b. format of material				
in written format				
in computer readable form				
c. time of filing/furnishing				
contained in international application as filed.				
filed together with the international application in computer readable form.				
furnished subsequently to this Authority for the purposes of search.				
Intrinsice subsequently to this reminerty for the perfect of section				
In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.				
4. Additional comments:				
$\cdot$				
·				

Form PCT/ISA/237(Box No. I) (January 2004)

International application No. PCT/US05/01452

Box No. V Reasoned statement under Rule 43 bis. 1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1. Statement					
Novelty (N)	Claims	NONE	YES		
• • •	Claims				
	o. ·	NONE '	370.0		
Inventive step (IS)		NONE '			
	Clantis				
Industrial applicability (IA)		NONE			
	Claims	1-23	NO		
2. Citations and explanations: Claims 1-23 lack novelty under PCT Article 33(2):	as heina anticina	ted by Goettl.			
Claims 1-25 lack hoverty under 1 O1 Atticle 55(2)	as come annorpa				
×.	•				
·					

Form PCT/ISA/237 (Box No. V) (January 2004)